Kentucky Department of Education
Science Adoption 2008-2014

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ISBN - **0022870687**	Publisher - **Macmillan/McGraw-Hill**			
Kentucky Student Edition				
Type - P1	Author - Hackett, and others			
Copyright - 2009	Edition - First	Readability -	Modified Dale-Chall 4.4	
Course - Science		Grade(s) -	4	
Teacher Edition ISBN if applicable			**0022871527**	

Overall Recommendation: ☒ **Recommended as Basal**

Overall Strengths, Weaknesses, Comments:

We found during our review that the TE and the SE were strongly linked to KY core content as well as multiple connections outside of science. We also found that multiple assessment were utilized in the form of quick checks, explore/inquiry investigations, and other outside connections such as "Times for Kids". Strong points such as excellent illustrations, strong vocabulary support, implimentation of "Foldables" as a learning device make this a strong basal addition to any science curriculum. We strongly recommend the ancillary materials but they are not essential to implementation of the reviewed material. Overall, the TE in itself can be used as a stand alone since it features such tools as background information, rubrics, chapter specific material lists and multiple pertinent graphic organizers. One addition we noticed that was helpful was the new learning cycle found at the top of each page in the TE which kept instruction focused.

CRITERIA
This basal resource …

A. Encompasses KY Content Standards & Grade Level Expectations	☒ **Strong Evidence** ☐ **Moderate Evidence** ☐ **Little or No Evidence**

☐ Text is designed to be used in an elective course outside the Program of Studies

1) Includes the 7 Big Ideas of science to the following extent:

a)	Structure and Transformation of Matter	☒ Strong	☐ Moderate	☐ Little	☐ N/A
b)	Motion and Forces	☒ Strong	☐ Moderate	☐ Little	☐ N/A
c)	The Earth and the Universe	☒ Strong	☐ Moderate	☐ Little	☐ N/A
d)	Unity and Diversity	☒ Strong	☐ Moderate	☐ Little	☐ N/A
e)	Biological Change	☒ Strong	☐ Moderate	☐ Little	☐ N/A
f)	Energy Transformation	☒ Strong	☐ Moderate	☐ Little	☐ N/A

g) Interdependence ☒ Strong ☐ Moderate ☐ Little ☐ N/A

2) **Addresses content-specific enduring understandings from the related Program of Studies standards.** ☒ Strong ☐ Moderate ☐ Little ☐ N/A

3) **Addresses content-specific skills and concepts from the related Program of Studies standards.** ☒ Strong ☐ Moderate ☐ Little ☐ N/A

4) **Content addressed is current, relevant and non-trivial** ☒ Strong ☐ Moderate ☐ Little ☐ N/A

5) **Provides opportunities for critical thinking/reasoning** ☒ Strong ☐ Moderate ☐ Little ☐ N/A

6) **Strengths, Weaknesses, Comments:**
- Specific strengths-which areas/concepts are covered exceptionally well?
- Specific weaknesses-which areas/concepts would likely require supplementing?

Extensive evidence of the content standards using such materials as quick checks on each page, vocabulary with linking page numbers, additional connections to all relevant concepts in other content areas. Once again vocabulary with photographs is helpful to the visual learner. The yellow pages section is helpful to teachers that lack content knowledge or feel threatened with specific science terminology.

B. Functionality & Suitability	☒ **Strong Evidence** ☐ **Moderate Evidence** ☐ **Little or No Evidence**

1) **Suitability** ☒ Strong ☐ Moderate ☐ Little ☐ N/A

- Should be suitable for use with a diverse population and is free of bias regarding race, age, ethnicity, gender, religion, social and/or geographic environment; is free of stereotyping or bias of any kind.

2) **Content quality** ☒ Strong ☐ Moderate ☐ Little ☐ N/A

- Free from factual errors
- Content is presented conceptually when possible—more than a mere collection of facts
- Content included accurately represents the knowledge base of the discipline
- Theories/scientific models contained represent a broad consensus of the scientific community

3) **Connections to Literacy** ☒ Strong ☐ Moderate ☐ Little
Note: may apply to either student or teacher editions

- Employs a variety of reading levels and is grade/level appropriate
- Contains pre, during, post reading activities
- Provides opportunities for summarizing, reviewing, and reinforcing vocabulary skills and concepts at multiple levels of difficulty for a variety of learning styles.
- Student text provides opportunity to integrate reading and writing
- Uses vocabulary that is age and content appropriate

- Focuses on critical vocabulary vs. extensive lists
- Identifies key vocabulary through definitions in both text and glossary
- Engaging text- does the text facilitate learning?
- Does understanding the text require having performed the imbedded activities?

4) Connections to Technology ☐ Strong ☒ Moderate ☐ Little

- Integrates technology and reflects the impact of technological advances
- Uses technology in the collection and/or manipulation of authentic data

5) Support for Diverse Learners ☒ Strong ☐ Moderate ☐ Little

- Provides support for ESL students
- Provides support for differentiation of instruction in diverse classrooms
  Note: may apply only to teacher edition

6) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

The techology is strongly referenced in the TE but not available for review. The Internet sites were under construction at the time of review. There are copious references to other technology available, but it was not available for review. Sections dedicated in TE to the diverse learner, references made to additional materials not available for review.

C. Supports Inquiry and Skill Development	☒ **Strong Evidence** ☐ **Moderate Evidence** ☐ **Little or No Evidence**

1) Promotes Inquiry, research and Application of Learning ☒ Strong ☐ Moderate ☐ Little

- Provides opportunities for inquiry and research that includes activities such as self-selecting topics, formulating authentic questions, gathering information, researching resources, observing, interviewing, and evaluating information, analyzing and synthesizing data and communicating findings and conclusions.
- Requires students to use higher-level cognitive skills (analysis, synthesis, evaluation, etc.)
- Provides activities and projects for students to deepen their knowledge and cultivate and strengthen problem-solving and decision-making skills.
- Provides opportunities for application of learned concepts.
- Uses a variety of relevant charts, graphs, diagrams, time lines, and other illustrations to invite and motivate students to engage in discussion, problem solving, and other high-order thinking skills.
- Emphasizes conceptual understandings that invite students to predict, conclude, evaluate, develop and extend ideas to support reasoning.
  Note: may apply to either teacher or student edition

2) Skill Development ☒ Strong ☐ Moderate ☐ Little

- Provides opportunities to make sense of data
- Provides opportunities for critical thinking and reasoning (analyze arguments, distinguish

fact/opinion, recognize bias)
- Provides opportunities to examine a range of types of evidence
- Contains embedded activities (or extensions) that emphasize use of technology for problem solving
  Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:

Graphic organizers are strongly referenced yet were not available for review although they were referenced in the TE. The student text did not have many graphs or tables used as models for data collection.

D. Supports Best Practices of Teaching and Learning	☒ **Strong Evidence** ☐ **Moderate Evidence** ☐ **Little or No Evidence**

1) Engages Students ☒ Strong ☐ Moderate ☐ Little

- Includes content geared to the needs, interests, and abilities of students
- Engages and motivates students using components such as real-life situations, simulations, experiments, and data gathering.
- Includes information and activities that assist students in seeing relevance of concepts (where appropriate) to their own lives and experiences
- Provides a variety of strategies, activities, and materials to enhance student learning at the appropriate learning levels
- Activities are truly congruent to the concepts addressed, not merely correlated
  Note: may apply to either teacher or student edition

2) Uses Assessment to Inform Instruction ☒ Strong ☐ Moderate ☐ Little

- Includes multiple means of assessment as an integral part of instruction
- Provides evaluation measures in the teacher edition that supports differentiated learning activities
- Embedded assessments reflect a variety of Depth of Knowledge levels
  Note: may apply to either teacher or student edition

3) Strengths, Weaknesses, Comments:
- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards

Evidence supports many opportunities for exploration and extensions to engage the students while staying with core content aligned concepts. Formative and summative assessments were found throughout and contained a lot of student led activities. Assessments were appropriate for diverse learners.

E. Has an Organization/ Format that Supports Learning and Teaching	☒ Strong Evidence ☐ Moderate Evidence ☐ Little or No Evidence

1) Organizational Quality ☒ Strong ☐ Moderate ☐ Little

- Print and/or electronic materials present minimal barriers to learners
- Presents chapters/lessons in an organized and logical sequence
- Provides clearly stated objectives for each lesson.
- Uses text features (e.g., titles, headings, subheadings, review questions, goals, objectives, space, print, type size, color) to enhance readability.
- Makes use of various forms of media (e.g., CD's, recordings, videos, cassette tapes, computer software, web-based components) as either student or teacher resources
- Includes clear, accurate, appropriate and clearly explained illustrations and/or graphics that reinforce content standards.
- Incorporates a glossary, footnotes, recordings, pictures, and/or tests that aid pupils and teachers in using the book effectively
- Uses grade-appropriate type size

Included media are durable, easy to use and have technical merit

- Construction appears to be durable and able to withstand normal use

2) Essential Components (beyond student and teacher text) ☐ Strong ☐ Moderate ☒ Little

- Items identified as essential components support the learning goals and concept coverage of the basal

3) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Student text and TE were the only components available for review. The TE was spiral bound in 3 sections making it easy to use for planning. Within the TE was a wrap around format showing the SE pages with all support materials needed to teach the content. The learning cycle organizer was referenced on each page of the TE and follpwed a logical sequence.

F. Has available Ancillary/ Gratis Materials *Note: The decision whether to recommend or not recommend this resource as a basal should not be influenced by Section F*	☒ Strong Evidence ☐ Moderate Evidence ☐ Little or No Evidence

1) Ancillary/Gratis Materials

- Coordinates teacher resources easily with student material (e.g., accompaniments included, student pages shown, instructional technology indicated).
- Are well-organized and easy to use
- Provide substantive learning opportunities and are congruent with student learning goals
- Provide opportunities for high-level thinking, assessment, and/or problem solving

2) Strengths, Weaknesses, Comments:

- Reviewers may provide page numbers to point out specific strong examples for individual evaluation standards.

Some of the essential support that is mentioned in the TE is available online and as accompanying hardcopy. Materials are strongly recommended by the reviewers such as the vocabulary cards, key concept cards, and the readers if you integrate science in other curricular areas.